

✓ 73. (Thrice Amended) An endoscope comprising:

a handle;

172 a tube assembly having a proximal end and a distal end, with said proximal end secured to said handle, said tube assembly comprising an inner tube [and] an outer tube[:], and a plurality of fiber optic elements extending lengthwise of and disposed between said inner and outer tubes, each of said fiber optic elements having a first end and a second end with the first ends of said fiber optic elements terminating at the distal end of said tube assembly and the second ends of said fiber optic elements projecting out from the proximal ends of said tube assembly into a cavity in said handle;

a first bi-directional electric motor disposed in a cavity in said handle, said motor having a rotary output shaft;

a first lens disposed in said inner tube at the distal end of said inner tube;

a photodetector disposed in said inner tube at the distal end thereof proximate said first lens, said photodetector being movable lengthwise of said inner tube toward and away from said first lens;

a first control rod carried by said tube assembly, said first control rod having a first end and a second end with the first end of said first control rod being coupled to said photodetector; said control rod being movable lengthwise of said tube assembly, whereby to move said photodetector toward or away from said first lens;

a first gear mechanism disposed in a cavity in said handle, said first gear mechanism being coupled between the second end of said first control rod and said rotary output shaft of said first bi-directional motor

for moving said first control rod lengthwise toward or away from said distal end of said tube assembly in response to operation of said first motor;

a second zoom lens disposed in said inner tube at said distal end thereof between said first lens and said photodetector; said zoom lens being movable lengthwise of said inner tube whereby to vary the magnification of the image that it transmits from said first lens to said photodetector;

a second bi-directional electric motor disposed in a cavity in said handle, said motor having a rotary output shaft;

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Cont'd  
a second control rod carried by said tube assembly, said second control rod having a first end and a second end with the first end of said second control rod being coupled to said zoom lens, said second control rod being movable lengthwise of said tube assembly, whereby to move said zoom lens toward or away from said first lens;

a second gear mechanism disposed in a cavity in said handle, said second gear mechanism being coupled between the second end of said second control rod and said rotary output shaft of said second bi-directional motor for moving said second control rod lengthwise toward or away from said distal end of said tube assembly in response to operation of said second motor;

means carried by said handle [and coupled to the second ends of each of said fiber optic elements] for injecting light into said second ends of said fiber optic elements;

first switch means carried by said handle and connected to said first motor for operating said first motor so as to selectively cause said first gear means to drive said first rod and thereby said photodetector in a

first direction toward the distal end of said tube assembly or in a second direction away from said distal end of said tube assembly; and

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second switch means carried by said handle and connected to said second motor for operating said second motor so as to selectively cause said second gear means to drive said second rod **and thereby said zoom lens** in a first direction toward the distal end of said tube assembly or in a second direction away from said distal end of said tube assembly.

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H 3  
76. (Thrice Amended) An endoscope according to claim [75] 73 / wherein said means for injecting light into said fiber optic elements comprises [an illumination assembly] **a light source** disposed in a cavity region of said handle.

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H 4  
378. (Amended) An endoscope according to claim 73 wherein said means for injecting light into said fiber optic elements comprises a **flexible** light-transmitting cable attached to and projecting from said handle for injecting light from a light source located outside of said handle.

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